The effect of childbirth fear and anxiety in the Turkish population on maternal self-efficacy for breastfeeding: A survey study

Prenetal anxiety and breastfeeding self-sufficiency

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Abstract

Aim: The aim of the present study was to investigate the effects of childbirth fear and anxiety experienced by pregnant patients in the prenatal period on breastfeeding self-efficacy of mothers in the postpartum period.

Material and Methods: This prospective cross-sectional study included pregnant patients at later stages of pregnancy between the 38th and 42nd weeks who had regular pregnancy follow-ups at the Obstetrics Outpatient Clinic in Turkey, who had no problems with pregnancy, had no psychiatric disorders, gave vaginal birth and agreed to participate. Under the physician's supervision, the patients were asked to complete the Visual Analog Scale (VAS) to measure fear of childbirth and the Beck Anxiety Inventory to assess their anxiety. In addition, the breastfeeding and breast milk arrival status of the patients were evaluated using Breastfeeding Self-Efficacy Scale on the first day of the postpartum period. Correlations of the obtained data were analyzed with Pearson's or Spearmen's correlation tests.

Results: It was observed that the Beck Anxiety Inventory score and VAS score measured in the prenatal period in 211 patients who participated in the study had negative correlations with breastfeeding status of patient in the postpartum period. Based on the results of this study, patients with intense fear of childbirth and patients with high anxiety during the prenatal period had low breastfeeding self-efficacy during the postpartum period.

Discussion: It is necessary that pregnant patients with fear of childbirth and with a high level of anxiety should be identified by their physicians during the prenatal follow-ups. Education programs should be organized to meet the needs of the parents, and support groups should be established for these parents. Further studies are needed in this regard.

Keywords

Beck Anxiety Inventory Score, Pregnancy, Postpartum Period, VAS

Introduction

Pregnancy is a unique process in which biopsychosocial changes occur and a woman prepares for birth action and parenthood by adapting to these changes. In parallel with the developments in healthcare today, pregnancy, childbirth and postpartum processes result in relatively few complications, but many women experience fear of these processes [1]. Women who are afraid of the pain during childbirth and who do not receive adequate support from healthcare personnel in this regard experience pain during childbirth more intensely. Previous studies indicated that sensory, emotional and psychosocial factors are associated with pain experienced at birth [2-4]. One of these psychosocial factors is anxiety [5].

It is important for the health of the baby that the mother can take care of, communicate with and breastfeed the baby in a healthy way during the postpartum period. Previous studies showed that mothers who experience anxiety and depression during pregnancy are more unsuccessful in managing the breastfeeding process [5-6]. Breastfeeding self-efficacy perception is the competence the mother feels about breastfeeding. It was reported that mothers with low breastfeeding self-efficacy are much more prone to depression in the postpartum period [7]. Zubaran et al. indicated that prenatal anxiety and depression caused mothers to have a much lower level of confidence in breastfeeding during the postpartum period [8]. We hypothesized that prenatal childbirth fear and anxiety would negatively affect postpartum breastfeeding self-efficacy.

Thus, the aim of the present study was to investigate the effects of the childbirth fear experienced by pregnant patients in the prenatal period and the patient's anxiety on mother's breastfeeding self-efficacy in the postpartum period.

Material and Methods

The study was prospective cross-sectional and was conducted between September 2018 and September 2020 after receiving the approval of the local ethics committee. The study consisted of female patients over the age of 18 who had been followed up in the Obstetrics and Gynecology outpatient clinic of Medical Park Yıldızlı Hospital, Trabzon/Turkey who gave vaginal birth and who met the inclusion criteria for the study. The study was started after obtaining written and oral consent from the patients. The patients who had coagulopathy and infection during their prenatal follow-ups, problematic pregnancy period, psychiatric disorder or additional systemic disease, treated for a chronic pain disorder, who received long-term opioid treatment, who did not have regular pregnancy follow-ups, and who were not willing to participate in the study were excluded. Pregnant patients who did not meet the above-defined exclusion criteria in the 38-42 weeks of pregnancy were included.

Evaluation of the Patients for mentioned scores and scales

The patients were questioned in the room where the outpatient examination was performed during a period before the labor was started. They were asked about their age, number of pregnancies, gestational week, educational status, employment status, income level, whether the pregnancy was planned, whether the patient was trained for pregnancy, whether the patient had regular follow-ups, whether maternal and/or fetal

diseases due to pregnancy developed, previous birth features, if any, (first birth, normal birth, cesarean delivery, etc.), the desired delivery method for the present pregnancy (vaginal birth) and whether the patient had problems with previous pregnancies. In addition, under the supervision of a physician, patients were asked to complete the Visual Analog Scale (VAS) to measure fear of childbirth and the Beck Anxiety Inventory to assess their anxiety. The delivery method (normal birth, epidural birth, cesarean delivery), the onset of the act of childbirth (spontaneous or induction), duration of labor in normal births (latent stage, active stage) were recorded by the physician during the peripartum period. In addition, the breastfeeding and milk arrival status of the patient on the first day of the postpartum period was evaluated using the Breastfeeding Self-Efficacy Scale. All measurements and evaluations were made by a physician who was an obstetrician.

Visual Analog Scale (VAS) used to measure fear of childbirth

VAS is a scale, and it can be used to measure the fear of childbirth in pregnant patients. VAS consists of a 10-cm long line with two ends named differently and is quite easy to use. Women were asked to rate pain from zero to 10. A zero point means no pain, while 10 refers to the most severe pain experienced. VAS is also a valid and reliable tool for measuring other subjective emotions such as pain and mood [10]. For this reason, VAS can be easily used to measure women's fears both during pregnancy and at birth.

Beck Anxiety Inventory (BAI)

BAI measures the frequency of anxiety symptoms experienced by an individual. It is a Likert- type self-evaluation scale consisting of twenty-one items, scored between 0 and 3. Higher total scores indicate higher anxiety levels experienced by the individual. It was developed by Beck et al [11]. and a Turkish validity and reliability study was carried out by Ulusoy et al [12]. The aim of the Beck Anxiety Inventory is to perform screenings rather than making diagnoses. The questions in the Beck Anxiety Inventory are related to anxiety symptoms. The person who takes the scale answers the questions by selecting one of four options: "not at all", "mildly", "moderately or "severely". The options were decided in the final week. The sample of the scale used in this study Cronbach's Alpha coefficient was found to be .93 for.

Breastfeeding Self-efficacy Scale

The early form of the scale developed by Dennis et al [13] to assess the breastfeeding self-efficacy levels of mothers consisted of 33 items. A short form of the scale was later created in 2003. This scale consists of a total of 14 items that evaluate the mother's breastfeeding self-efficacy. Dennis recommends this short form for use. It is easier to apply and evaluate self-sufficiency correctly. The scale is a five-point Likert type and the items of the scale are rated from 1: "not at all confident" to 5: "always confident". The lowest score on the scale is 14 and the highest is 70. Higher scores indicate higher breastfeeding self-efficacy. Dennis stated that it is appropriate to use the scale in the postpartum period. Aluş et al. [14] performed the Turkish reliability - validity study of the short form of breastfeeding self-efficacy scale and found a Cronbach's alpha value of 0.86, indicating that the scale is suitable for Turkish culture.

Statistical Analyses

In the study, the Visual Analog Scale (VAS) was used to evaluate the fear of childbirth, the Beck Anxiety Inventory was used to measure the anxiety levels, and the Breastfeeding Self-Efficacy Scale was used to evaluate the breastfeeding self-sufficiency levels of mothers. The conformity of the data to the normal distribution was evaluated by considering the Kolmogorov-Smirnov test, and then the coefficients of skewness and kurtosis. Descriptive statistics of continuous variables were expressed as mean ±standard deviation, while the distribution of categorical variables was expressed as numbers and percentages. Parametric tests (Independent Samples t-test and One-Way ANOVA test) were used to compare the means of the variables. The relationships between the variables were analyzed using correlation test. Multiple linear regression models were established to predict breastfeeding self-efficacy using independent variables. Dummy variables were created for the categorical variables and included in the model, and assumptions of multiple linear regression analysis were shown in a step-wise fashion. P values obtained as a result of statistical analyses were evaluated at α= 0.05 significance level and 95% confidence interval. Comparisons were considered statistically significant when p-values were less than 0.05. For statistical analyses of the data set, IBM SPSS Statistics 22 software was used.

Results

The study included 211 pregnant women aged 18-42 who gave birth (Table 1). The data showed that factors such as the educational and employment status of the mother, whether the pregnancy was planned, whether a previous pregnancy was problematic, whether the mother received training about breastfeeding, and whether the baby received additional food had no significant effect on the mother's breastfeeding self-efficacy status (p>0.05) (Table 2). However, the income level affected average breastfeeding self-efficacy scores. Breastfeeding self-efficacy scores of mothers with higher

income levels were also higher (p=0.047) (Table 2).

Pearson's correlation analysis showed a significant positive relationship between the VAS score used to measure fear of childbirth and Beck Anxiety Inventory score (r=0.877, p<0.001) (Table 3) (Figure 1A). On the other hand, there was a negative significant relationship between VAS scores and Breastfeeding Self-Efficacy scale scores (r=-0.858, p<0.001) (Table 3, Figure 1B). Similarly, the correlation between the Beck Anxiety

Table 1. Descriptive statistics of sociodemographic characteristics of patients

Variable	N	Minimum	Maximum	Mean± Standard Deviation
Age	211	18	42	28,66±4,84
Number of pregnancy	211	1	9	2,03±1,29
Pregnancy week	211	38	42	39,25±1,15

Table 2. Sociodemographic and breastfeeding related features

Variables		N	%	Breastfeeding self-efficacy (Mean±SD)	p
Mother's employment status	Unemployed	180	85.3	22.01±5.51	0.134**
	Employed	31	14.7	20.39±5.70	
Income level	Poor	8	3.8	26.38±6.37	0.047*
	Moderate	189	89.6	21.65±5.41	
	Good	14	6.6	20.71±6.21	
Was the pregnancy planned?	No	38	17.9	22.79±6.35	0.211**
	Yes	173	81.7	21.54±5.35	
Was the previous pregnancy problematic?	First pregnancy	60	28.4	-	0.322**
	No	142	67.3	22.20± 5.59	
	Yes	9	4.2	20.33± 2.29	
Did mother take breastfeeding training?	Yes	78	37.0	21.45±6.10	0.153**
	No	133	63.0	21.95± 5.22	
Did baby have additional food?	Yes	48	22.7	21.15±5.40	0.378**
	No	163	77.3	21.95±5.60	
Total		211	100	21.77±5.55	

*: One-way ANOVA, **: Independent t-test

Table 3. Correlation analysis between the study variables

Variables	VAS score		Breastfeeding Self-Efficacy score		Beck Anxiety Inventory score	
	r	p	r	p	r	p
VAS score	1	-	-0.880**	<0.001	0.885**	<0.001
Age	0.019	0.782	-0.063	0.365	0.023	0.736
Mother's employment status	0.177**	0.010	-0.103	0.134	0.139*	0.044
Income level	0.140*	0.042	-0.137*	0.050	0.152*	0.027
Was the pregnancy planned?	0.067	0.332	-0.086	0.211	0.091	0.190
Did mother take breastfeeding training?	0.083	0.231	-0.044	0.524	0.050	0.467
Was the previous pregnancy problematic?	0.131	0.057	-0.104	0.132	0.148*	0.031
Did baby have additional food?	0.115	0.097	-0.061	0.378	0.093	0.180
Breastfeeding Self-Efficacy Scale score	-0.880**	<0.001	1		-0.939**	<0.001
Beck Anxiety Inventory score	0.885**	<0.001	-0.939**	<0.001	0.017	0.139*

*: p<0.05, **: p<0.001, r: Pearson Correlation Coefficient
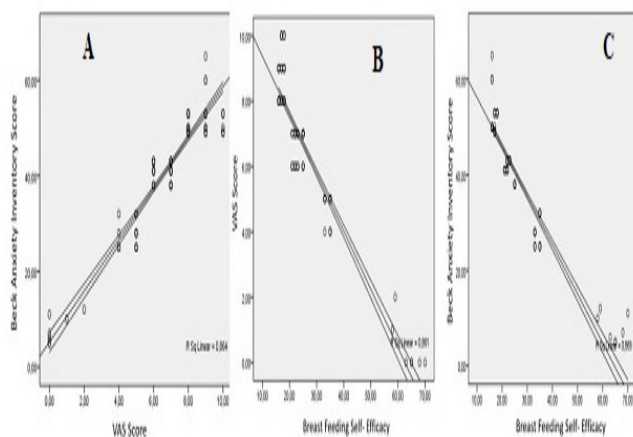

Figure 1. A; Correlation graph between Beck Anxiety Inventory score and VAS score. B; Correlation graph between VAS score and Breast feeding Self-Efficacy scores. C; Correlation graph between Beck Anxiety Inventory score and Breast feeding Self-Efficacy scores

Inventory score and Breastfeeding Self-Efficacy scores was also significant and negative (r = -0.853, p<0.001) (Table 3, Figure 1C).

Discussion

In the present study, it was observed that factors such as the employment status, whether the pregnancy was planned, whether the previous pregnancy was problematic, whether training for breastfeeding was received, and whether the baby had additional food, did not have significant effect on breastfeeding self-efficacy levels of women. However, mothers with higher income levels had significantly higher breastfeeding self-efficacy scores. Breastfeeding self-efficacy measured during the postpartum period had significant negative correlations with the Beck Anxiety Inventory score, measured in the prenatal period and the VAS score, used to measure fear of childbirth.

Fear of childbirth refers to the fears related to childbirth experienced before, during and after childbirth. While the acceptable levels of fear in the prenatal period could help stimulate mother to prepare for childbirth, a pathological level of fear is called tokophobia [14]. Fear of childbirth is common in society, and most women experience mild to moderate fear of childbirth especially in the prenatal period. Severe fear of childbirth is less common, but it is very important for maternal health in terms of its outcomes [15,16]. A Swedish study by Zar et al. in 2001 indicated that one in five pregnant women suffered from the fear of childbirth, and 5% experienced serious psychological problems such as anxiety and depression due to fear of childbirth [15]. Poikkeus et al. [17], on the other hand, reported that 6-13% of women had severe fear of childbirth, and that women could not cope with this fear. Similarly, Fenwick et al. found that 26% of women experienced low birth anxiety, 48% had moderate and 26% high levels of childbirth fear and consequent anxiety [18]. In a study conducted in Turkey, 38.8% of the participants experienced severe fear and 8.2% experienced clinical level of fear [19].

Gao et al. [20] found that a high level of patient anxiety during the prenatal period increases the fear of childbirth. In patients who were psychologically weak but whose anxiety and depression statuses were improved with supportive treatment, this fear decreased [19]. In a similar study, Fairbrother et al. [21] reported that post-traumatic stress disorder during pregnancy increases the fear of childbirth. Soderquist et al. [22], on the other hand, mentioned that this fear decreased in patients treated for stress-related anxiety and depression. Fear of childbirth has many negative consequences in prenatal, pregnancy, and postpartum periods for the mother-child relationship. There are numerous studies in the literature reporting that the fear of childbirth observed in the prenatal period causes negative consequences in pregnant women such as excessive tension, absent-mindedness, anxiety, depression and premature birth [23,24]. This may also affect the postpartum period, with negative consequences such as delayed mother-baby interaction, breastfeeding problems, newborn-related problems and postpartum depression [25]. In their study, Rouhe et al. [24] stated that one of the two most important factors for poor mother-infant interaction, inability to provide milk

and need to take psychiatric care in postpartum period, is fear of childbirth. Thus, the results of the present study appear to be compatible with the literature. We observed that the Beck Anxiety Inventory score of our pregnant patients measured in the prenatal period had a significant positive correlation with the VAS score used to measure fear of childbirth. In addition, we observed that the maternal breastfeeding self-efficacy level measured to evaluate the breastfeeding status of postpartum patients had significant negative correlations with anxiety and fear of childbirth measured in the prenatal period.

The most important limitation of the study is that it was conducted in a single center and with a small number of patients. Prospective randomized studies on this subject will provide great benefits in terms of maternal and child health in the postpartum period.

Conclusion

Based on the results of the present study, the patients with high childbirth fear and anxiety levels during the prenatal period had low breastfeeding self-efficacy during the postpartum period. For this reason, pregnant patients with high levels of childbirth fear and with high anxiety levels should be identified by physicians during the regular follow-ups in the prenatal period, and education programs should be organized and support groups should be established to meet the needs of parents. It is recommended that the education programs to strengthen the perception of breastfeeding self-efficacy should start in the antenatal period, and physicians should be aware of this situation, be more sensitive to this group and organize more intensive training programs towards them. Further studies are needed in this regard.

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